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CERTIFICATE OF MAILING

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Date: September 13, 2005

By: Mari Kleineidam
Mari Kleineidam

PATENT

Attorney Docket No. GC816

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	Group Art Unit: 1639
)	
AEHLE <i>et al.</i>)	Examiner: Unknown
)	
Serial No.: 10/688,255)	
)	
Filed: October 16, 2003)	
)	
For: Generation of Stabilized Proteins)	
by Combinatorial Consensus)	
Mutagenesis)	

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit herewith patents, publications or other information (listed on the attached Form PTO-1449 and attached thereto) of which they are aware, that they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Information Disclosure Statement:

(a) ☐ accompanies the new patent application submitted herewith. 37 CFR §1.97(a).

(b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry into the national stage of a PCT application as set forth in 37 CFR §1.491.

(c) ☒ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits.

(d) ☐ is filed after the first Office Action and more than three months after the application filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180.00) set forth in 37 CFR §1.17(p) or a certification as specified in 37 CFR §1.97(e), as checked below. Authorization to charge Deposit Account No. 07-1048 in the amount of \$180.00 to cover the cost of this Information Disclosure Statement is provided in the Transmittal Letter submitted herewith in duplicate.

(e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by authorization (in the Transmittal Letter submitted herewith in duplicate) to charge Deposit Account No. 07-1048 the fee (\$180.00) set forth in 37 CFR §1.17(l)(1) and a certification as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the Supplemental Information Disclosure Statement.**

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR §1.97(e) may need to be completed.] The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ No item of information contained in this Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

A copy of the items on Form PTO-1449 is supplied: PCT International Search Report for PCT/US04/30085, filed 15 September 2004 with attached patents and publications.

☒ each ☐ none ☐ only those listed below:

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Filed: October 16, 2003

Those patent(s) or publication(s) which are marked with an asterisk (*) on the attached Form PTO-1449 are not supplied because they were previously cited by or submitted to the Office in a prior application, Serial No. _____ filed _____, and relied upon in this application for an earlier filing date under 35 USC 120.

Those patent(s) or publication(s) which are marked with an asterisk (**) on the attached Form PTO-1449 (**Books not sent**) are not supplied. Complete bibliographic information is unknown or unavailable. The cited publications are books or reference manuals and are commonly available. Reproduction of such publications would result in a voluminous submission.

A concise explanation of relevance of the items listed on PTO-1449 is:

- ☒ not given
- ☐ given for each listed item
- ☐ given for only non-English language listed item(s)
- ☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

The Examiner is reminded that a "concise explanation of the relevance" of the submitted prior art "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention." MPEP §609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

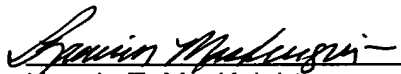
In accordance with 37 CFR §1.97(b), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as

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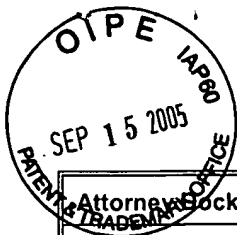
defined in 37 CFR §1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

Dated: 13 September 2005


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INFORMATION DISCLOSURE CITATION

Attorney's Office No.: GC816	Serial No.: 10/688,255
Applicant: AEHLE et al.	
Filing Date: October 16, 2003	Group: 1639
Page 1 of 2	Date of this Submission: September 13, 2005

US PATENT DOCUMENTS

Examiner's Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date
	5,605,793	02-25-97	Stemmer	435	6	02-17-94
	5,965,408	10-12-99	Short	435	91.1	07-09-96
	6,582,914 B1	06-24-03	Caldwell et al.	435	6	10-26-00
	6,706,503 B2	03-16-04	Schellenberger et al.	435	170	10-23-01
	6,713,279 B1	03-30-04	Short	435	69.1	02-04-00

FOREIGN PATENT DOCUMENTS

Examiner's Initials	Document Number	Date	Country	Class	Sub-Class	Translation Yes/No
	WO 98/42728	01.10.98	WIPO			

OTHER DOCUMENTS

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
	International Search Report for PCT/US04/30085 filed 15 September 2004 and Written Opinion.
	Arnold, U. et al., "Kinetic and Thermodynamic Thermal Stabilities of Ribonuclease A and Ribonuclease B, <i>Biochemistry</i> ," 36:2166-2172, 1997.
	Boehm, M. K. et al., "Crystal structure of the anti-(carcinoembryonic antigen) single-chain Fv antibody MFE-23 and a model for antigen binding based on intermolecular contacts," <i>Biochem. J.</i> , 346:519-528, 2000.
Examiner	Date Considered
Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
PTO-1449	

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Page 2 of 2	Date of this Submission: September 13, 2005

OTHER DOCUMENTS

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
	Free, S. M. et al., "A Mathematical Contribution to Structure – Activity Studies," <i>Journal of Medicinal Chemistry</i> , 7(4):395-399.
	**Hale & Marham, The Harper Collins Dictionary of Biology, Harper Perennial, NY (1991).
	Lehmann, M. et al., "From DNA sequence to improved functionality: using protein sequence comparisons to rapidly design a thermostable consensus phytase," <i>Protein Engineering</i> , 13(1):49-57, 2000.
	Lehmann, M. et al., "The consensus concept for thermostability engineering of proteins: further proof of concept," <i>Protein Engineering</i> , 15(5):403-411, 2002.
	Lottspeich, Friedrich and Zorbas, Haralabos (Hrsg.), (eds.), <i>Bioanalytik</i> , Spektrum Akademischer Verlag, pp. 233-241, 1998.
	Merino et al., "A General, PCR-Based Method for Single or Combinatorial Oligonucleotide-Directed Mutagenesis on pUC/M13 Vectors," <i>BioTechniques</i> , 12(4):508-509, 1992.
	Meyerhans, A. et al., "DNA recombination during PCR," <i>Nucleic Acids Research</i> , 18(7):1687-1691, 1990.
	Ostermeier, M., "Synthetic gene libraries: in search of the optimal diversity," <i>TRENDS in Biotechnology</i> , 21(6):244-247, 2003.
	Osuna, J. et al., "Combinatorial mutagenesis of three major groove-contacting residues of <i>EcoRI</i> : single and double amino acid replacements retaining methyltransferase-sensitive activities," <i>Gene</i> , 106:7-12, 1991.
	Pozsgay, M., "Study of the Specificity of Thrombin with Tripeptidyl- <i>p</i> -nitroanilide Substrates," <i>Eur. J. Biochem.</i> , 115:491-495, 1981.
	**Singleton et al., <i>Dictionary of Microbiology and Molecular Biology</i> , 2d Ed., John Wiley and Sons, New York (1994).
	Stemmer, "Combinatorial Multiple Cassette Mutagenesis Creates All the Permutations of Mutant and Wild-Type Sequences," <i>BioTechniques</i> , 18(2):194-196, 1995.
	Tu et al., "Generation of a Combination of Mutations by Use of Multiple Mutagenic Oligonucleotides," <i>BioTechniques</i> , 20(3):352-353, 1996.
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